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Mount Pleasant Mines Limited

Annual Report
1965



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NICKOLAS AXIOTIS

Warren, Ohio

Contractor and Business Executive

KENNETH A. CREERY

Montreal, Quebec

Director of Conwest Explorations and
several other Canadian corporations

CLAYTON ALEXANDER FITZSIMMONS

Ottawa, Ontario

Realtor

ARTHUR HELMUT HINDRICH

Montreal, Quebec

President and principal shareholder
of Artoma Investments Ltd., Montreal

DONALD GORDON MACGREGOR

Toronto, Ontario

Broker - One of the principal
shareholders of W.D. Latimer Co. Limited

BOARD OF DIRECTORS

DONALD GRAHAM MUNRO

Ottawa, Ontario

Full-time Secretary-Treasurer of the
Company and previously Management
Consultant with the firm of W. Wallace
Muir & Associates Ltd. of Ottawa,
Ontario

JOHN EVANS RIDDELL

B.Eng., M.Sc., Ph.D.

St. Andrews, N.B.

Consulting Geologist

C. JOHN SULLIVAN

B.Sc., M.Sc.

Toronto, Ontario

President of Kennco Explorations
(Canada) Limited

WILLIAM LEE YOUNG

B.Sc., M.Sc., Ph.D.

Ottawa, Ontario

Consulting Geologist

CHAIRMAN:

John Evans Riddell

PRESIDENT AND MANAGING DIRECTOR:

William Lee Young

EXECUTIVE VICE-PRESIDENT:

Arthur Helmut Hindrichs

OFFICERS

VICE-PRESIDENT:

Sir John Lomax

SECRETARY-TREASURER:

Donald Graham Munro

Mount Pleasant Mines Limited

30 The Driveway,
Ottawa 4, Ontario.

President's Report To Shareholders

This annual report to shareholders reviews the progress of the company up to the end of 1965.

The year was one in which Canadian business and industry was confronted by a contracted money market which hampered and severely restricted progress and development. The mining industry was no exception and a feasibility study of a production operation on the North Zone of our Mount Pleasant Mines property had to be curtailed.

We had only sufficient funds available to enable progress to a point where valuable information was obtained that led Canadian Bechtel Limited, Engineers, to report on December 21, 1965:

"The results of our program have been encouraging and it is unfortunate that the program has been suspended at this stage. We can, however, offer the following recommendations:

- (1) A 125 ton per day test mill should be constructed and operated as a source of metallurgical information and revenue. We believe that sufficient ore has been proven and indicated to pay for the cost of the mill, to cover the milling and mining costs, and support a limited development program.
- (2) The underground development program should be continued to establish additional ore reserves. The results of our limited program in the three areas investigated have been highly satisfactory and give considerable promise for the other areas not yet evaluated.
- (3) The underground mapping and the diamond drill core check logging should be completed and the geological plans and sections should be prepared. This data will provide information to further evaluate the indicated ore reserve potential and to plan future development."

The financial situation in which we found ourselves in common with other developers had caused us to limit the Canadian Bechtel underground program. It was confined to reporting on some of the high grade ore locations. No assessment was consequently made of the average grade areas.

Your company management and engineers endorse Canadian Bechtel's summary, but recommend a concentrator capacity of 150 tons per day preceded by a Heavy Media Plant capable of handling lower grade mine and development rock. Such an operation has been costed (May 1966) by T.R. Clarke and Associates, consulting engineers, Toronto, as follows:

Plant and equipment	\$ 962,500
Preproduction development	287,500
Working capital	175,000
Design fees and contingency	<u>75,000</u>
Total financial requirements	\$1,500,000

Based on net smelter returns for tin @ \$1.50 per pound and for zinc @ \$0.04 per pound, Clarke and Associates project the net value per ton recovery from the proposed plant at \$28.36 per ton. Operating costs are estimated at \$16.00 per ton for a net profit per ton of \$12.36 or an operating profit per year of \$667,440.

In order to finance the proposal it is recommended that the company assume a five-year debenture for \$1,500,000 @ 7%. The debenture would be repaid at the end of the fifth year. At that moment we would have accumulated a working capital position of some \$1,720,960.

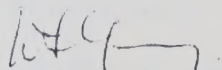
The 150 ton per day operation would be expanded step by step towards the ultimate potential of the property as funds became available.

Your directors are consequently continuing their efforts towards raising the required capital while at the same time seeking to protect the equity of shareholders.

We are indeed grateful for the continued support of shareholders, many of whom have been with us since the beginning of this enterprise.

As the money market eases, we are confident that Mount Pleasant can be brought to profitable production.

Yours very truly,



William L. Young,
President,
On Behalf of the Board.

June 15, 1966

Arthur. A. Crawley & Co.
Chartered Accountants

RESIDENT PARTNERS

ARTHUR A. CRAWLEY, F.C.A.
ALFRED S. MERRIKIN, F.C.A.
CHARLES W. MILNER, C.A.
STANLEY G. PAYNE, F.C.A.
J. RAY LEWIS, C.A.
CHARLES G. ANDERSON, C.A.
ALFRED H. RITCHIE, C.A.
JACQUES GROSLOUIS, C.A.
GERALD A. GREER, C.A.
JAMES E. PHILPOTT, C.A.
FREDERICK S. JAMES, B.COMM., C.A.

387 Albert Street

Ottawa 4, Ontario

OFFICES AT

OTTAWA, MONTREAL
TORONTO, BROCKVILLE
PEMBROKE, NORTH BAY
SUDBURY, SAULT STE. MARIE
WINNIPEG, VANCOUVER

February 28, 1966

To The Shareholders,
Mount Pleasant Mines Limited.

We have examined the balance sheet of Mount Pleasant Mines Limited at December 31, 1965 and the statements of development and administrative expenses deferred for the year ended on that date. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion the accompanying balance sheet and supporting statements of development and administrative expenses deferred, present fairly the financial position of the company at December 31, 1965 in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Arthur A. Crawley & Co.

MOUNT PLEASANT MI.
(Incorporated under the laws of
BALANCE S
December 31

ASSETS

CURRENT:

Cash	\$ 10,703.19	
Sundry accounts receivable	1,094.32	
Mine supplies, at cost and prepaid expenses	<u>14,506.13</u>	\$ 26,303.64

FIXED:

Equipment, buildings and facilities - at cost, - note 1		237,718.13
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MINING CLAIMS:

Township of Charlotte County, New Brunswick:

80 patented mining claims acquired for 884,000 common shares of the company at 10 cents per share and a cash consideration of \$1,600.00 (1959)	90,000.00	
31 patented mining claims acquired for 200,000 common shares of the company at \$1.00 per share (1965) - note 2	200,000.00	
70 patented mining claims and area reservation covering former 362 unpatented mining claims, staked by the company (costs included in deferred expenses)		<u>290,000.00</u>

INVESTMENTS: at cost - note 3

Subsidiary companies:		
Shares	50,000.00	
Advances	16,355.34	
Other investments - shares	<u>74,005.00</u>	140,360.34

OTHER:

Incorporation and organization expense	3,208.13	
Development expenses deferred - schedule 1	2,550,557.23	
Administrative expenses deferred - schedule 2	<u>619,555.37</u>	<u>3,173,320.73</u>
		<u>\$3,867,702.84</u>

Approved on behalf of the Board:

W.L. Young Director

N. Axiotis Director.

SS LIMITED
(The Province of Ontario)
ET
1965

LIABILITIES

CURRENT:

Bank loan - secured by investments and general assignment of book debts	\$ 20,000.00	
Accounts payable and accrued liabilities	<u>230,731.28</u>	\$ 250,731.28

SHAREHOLDERS' EQUITY

CAPITAL STOCK AUTHORIZED:

128,398 5% non-cumulative preference shares of
50 cents each, redeemable at par
7,500,000 common shares without par value, aggregate
consideration not to exceed \$7,500,000.00

CAPITAL STOCK ISSUED: - note 4

Common shares:

Issued for - property	1,084,000 shares	288,400.00
- cash	4,367,275 shares	3,214,820.26
- other consideration	<u>73,751 shares</u>	<u>73,751.30</u>
	5,525,026 shares	3,576,971.56

CONTRIBUTED SURPLUS:

Premium on issue of preference shares (1963)	<u>40,000.00</u>	3,616,971.56
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CONTINGENT LIABILITY - note 5

\$3,867,702.84

Issued in accordance with our accompanying report of this date.

Arthur A. Crawley Co.

February 28, 1966.

Chartered Accountants.

MOUNT PLEASANT MINES LIMITED
EXPLANATORY NOTES TO FINANCIAL STATEMENTS
December 31, 1965.

Note 1. The total amount of equipment, buildings and facilities includes frame buildings of \$40,805.60 and service facilities of \$15,058.37. No provision for depreciation of any fixed assets has been made as the company has not reached production.

Note 2. By agreement dated January 28, 1965, Mount Pleasant acquired 31 patented mining claims of Kennco Explorations (Canada) Limited and issued in consideration therefor and in consideration of the settlement of all commitments under previous agreements 260,000 fully paid common shares. The commitments from which the company was released included:

- (1) the commitment to transfer to Brunswick Tin Mines Limited, a holding company incorporated for the purpose, 100 patented mining claims of the company and 31 patented mining claims of Kennco and to give Kennco 10% of the equity.
- (2) a contractual liability of \$60,000.00, being the aggregate of sums expended by Kennco on the property under previous agreements, which amount became payable within two years of June 8, 1964, following the exercise of an option by the company to incorporate the holding company noted above in (1).

The 260,000 shares were issued at \$1.00 per share, and the shares will be held in escrow until Mount Pleasant has completed its senior financing or for three years, whichever is earlier.

Note 3. Investments:	Advances	Shares
Subsidiary companies:		
Atlantic Nickel Mines Limited - 50,000 voting Class B shares (10 votes per share) - note below	\$ 15,030.34	\$ 50,000.00
Brunswick Tin Mines Limited - advance for incorporation of company not operating and without assets	<u>1,325.00</u>	
	<u>\$ 16,355.34</u>	<u>\$ 50,000.00</u>
Other:		
Geo-Met Reactors Limited (metallurgical research company) - 320,000 common shares (33% interest)		49,700.00
Mount Costigan Mines Limited - 36,300 common shares (quoted market value \$8,712.00)		12,705.00
Cornish Tin Improvements Limited -		
1,000 7% preference shares		10,000.00
14,000 common shares (16 2/3% interest)		<u>1,600.00</u>
		<u>74,005.00</u>

Atlantic Nickel Mines Limited:

There are no accumulated profits or losses in the accounts of Atlantic Nickel Mines Limited. Under an option agreement with St. Stephen Nickel Mines Limited, Mount Pleasant paid \$50,000.00 to acquire an interest in the mining property, buildings and equipment of St. Stephen

MOUNT PLEASANT MINES LIMITED
EXPLANATORY NOTES TO FINANCIAL STATEMENTS (CONTINUED)
December 31, 1965

Nickel Mines Limited in the Province of New Brunswick. Pursuant to the agreement Mount Pleasant incorporated Atlantic Nickel Mines Limited to acquire the property. Atlantic issued 50,000 class B shares to Mount Pleasant, 100,000 non-voting Class A shares at \$1.00 each to the shareholders of St. Stephen and 250,000 common shares for \$25,000.00 to St. Stephen Nickel Mines Limited. The class A and class B shares are convertible at various times into common shares at the rate of 10 common for each class A or class B share. Mount Pleasant presently has voting control of Atlantic through its class B shares and a voting agreement on the common shares and has an option to purchase the common shares from St. Stephen. Consolidation is not considered desirable in view of the interests of other shareholders.

Note 4. The changes in the issued share capital during the year are summarized as follows:

	Shares	Consideration
Balance December 31, 1964	4,738,200	\$2,812,847.26
Shares Issued:		
For mining claims - note 1	200,000	200,000.00
For cash	513,075	490,373.00
For commision, rights offering	13,751	13,751.30
To discharge contractual liability		
- note 1	<u>60,000</u>	<u>60,000.00</u>
Balance December 31, 1965	<u>5,525,026</u>	<u>\$3,576,971.56</u>

Note 5. Contingency:

The company has received and accepted a letter of intent from Kloeckner Humboldt-Deutz, A.G. of Cologne, Germany, heavy equipment manufacturers and engineers, for the design and construction of a mill concentrator and smelter complex. The terms of the letter of intent include the extension of credit to the Company by Kloeckner covering a substantial portion of the cost of plant and heavy equipment provided directly to them. In the event that certain technical data supplied by Kloeckner is put to use by Mount Pleasant other than through this company, Mount Pleasant shall be liable for approximately \$53,000.00

MOUNT PLEASANT MINES LIMITED
STATEMENT OF DEVELOPMENT EXPENSES DEFERRED
Year Ended December 31, 1965

	Balance January 1, 1965	Expended During Year	Balance December 31, 1965
Survey expenses, surface exploration	\$ 74,681.82	\$ 1,983.04	\$ 76,664.86
Claim fees	15,187.45	1,845.50	17,032.95
Stripping, trenching and land cleaning	27,128.06	1,650.82	28,778.88
Surface diamond drilling	259,529.51	-	259,529.51
Diamond drilling and other expenses			
- Kennco - note 2	60,000.00	-	60,000.00
Assaying, technical and laboratory expense	168,158.00	13,501.57	181,659.57
Geochemical surveying	13,096.73	-	13,096.73
Salaries and wages	259,293.26	39,274.35	298,567.61
Unemployment insurance	2,376.60	516.01	2,892.61
Workmen's compensation insurance	12,192.49	1,857.14	14,049.63
Management and consulting fees, technical	221,145.01	63,369.21	284,514.22
Feasibility study, fees and direct costs	11,274.51	69,662.34	80,936.85
Camp supplies, maintenance and rentals	76,263.57	48,826.69	125,090.26
Road construction and maintenance	26,644.62	1,633.02	28,277.64
Vehicle operation	53,862.14	7,327.29	61,189.43
Equipment repairs, maintenance and rentals	7,836.62	21,543.00	29,379.62
Insurance	15,022.01	5,086.47	20,108.48
Freight and express	3,432.83	1,860.38	5,293.21
Property compensation	15,110.00	5,200.00	20,310.00
Miscellaneous expenses	12,399.38	2,861.14	15,260.52
Mine office expenses	22,913.80	4,755.74	27,669.54
Travel	46,841.88	10,856.28	57,698.16
Metallurgical research	369,727.21	47,365.07	417,092.28
Geology and engineering office expense	20,998.25	1,949.46	22,947.71
Underground diamond drilling	99,997.99	210.63	100,208.62
Adit and underground expense	105,180.05	7,434.53	112,614.58
Drifts, crosscuts, raises and stopes	112,355.57	59,371.90	171,727.47
Loss on disposal of equipment	2,487.57	6,994.33	9,481.90
Mill site development	8,020.02	464.37	8,484.39
	<u>\$2,123,156.95</u>	<u>\$427,400.28</u>	<u>\$2,550,557.23</u>

MOUNT PLEASANT MINES LIMITED
STATEMENT OF ADMINISTRATIVE EXPENSES DEFERRED
Year Ended December 31, 1965

	Balance January 1, 1965	Expended During Year	Balance December 31, 1965
Capital stock expenses	\$ 22,621.11	\$ 18,587.64	\$ 41,208.75
Commission on sale of capital stock	16,540.50	13,751.30	30,291.80
Management and consulting fees	77,618.35	14,005.38	91,623.73
Interest and bank charges	4,278.04	3,570.71	7,848.75
Miscellaneous	7,090.15	454.56	7,544.71
Office rent	21,921.69	6,632.80	28,554.49
Printing, stationery and office	18,942.08	3,497.11	22,439.19
Legal fees	24,726.06	6,775.00	31,501.06
Auditing and accounting	12,695.00	3,600.00	16,295.00
Prospectus and shareholders' information	83,141.90	15,187.77	98,329.67
Salaries	75,791.79	21,784.96	97,576.75
Telephone and telegraph	26,012.25	6,540.76	32,553.01
Travelling	88,537.31	18,309.86	106,847.17
Unemployment insurance	560.81	-	560.81
Directors' fees	15,400.00	7,100.00	22,500.00
Insurance	5,016.17	1,304.71	6,320.88
Business taxes	1,310.37	612.12	1,922.49
Bad debts	<u>5,058.89</u>	<u>-</u>	<u>5,058.89</u>
	507,262.47	141,714.68	648,977.15
Less: Interest on short term investments	(16,523.14)	-	(16,523.14)
Dividends, Geo-Met Reactors Limited	<u>(12,898.64)</u>	<u>-</u>	<u>(12,898.64)</u>
	<u>\$477,840.69</u>	<u>\$141,714.68</u>	<u>\$619,555.37</u>

Lee B

Tin and Mount Pleasant Mines Limited

Interim Report to Shareholders

A READY REFERENCE
for shareholders
on the company; its management,
potential, and performance
in bringing North America's
first major tin mine
to production.

May 1965

Board of Directors

Nickolas Axiotis

Warren, Ohio

Contractor and Business Executive

Clayton Alexander Fitzsimmons

Ottawa, Ontario

Realtor

Arthur Helmut Hindrichs

Montreal, Quebec

President and principal shareholder of
Artoma Investments Limited, Montreal.

Donald Gordon MacGregor

Toronto, Ontario

Broker — One of the principal share-
holders of W. D. Latimer Co. Limited

Donald Graham Munro

Ottawa, Ontario

Previously Management Consultant
with the firm of W. Wallace Muir &
Associates Ltd. of Ottawa, Ontario

Edwin Henry Marley

London, England

Chairman of E. H. Marley & Partners
Limited, Merchant Bankers, London,
England, previously General Manager
& Director of Close Brothers Limited,
London, England

Desmond Barnaby O'Brien

Cheshire, England

Director of E. H. Marley & Partners
Limited, Merchant Bankers, London,
England. Member Lloyds of London

John Evans Riddell, B.Eng. M.Sc., Ph.D.

St. Andrews, N.B.

Consulting Geologist

William Lee Young, B.Sc., M.Sc., Ph.D.

Ottawa, Ontario

Consulting Geologist

Officers

Chairman:

Edwin Henry Marley

President:

John Evans Riddell

Executive Vice-President:

Arthur Helmut Hindrichs

Vice-President:

Sir John Lomax

Secretary-Treasurer:

Donald Graham Munro

Listed on

Canadian Stock Exchange, Montreal

Vancouver Stock Exchange

Stock Market Ticker Abbreviation—MPL

Address

30 The Driveway, Ottawa 4,
Ontario, Canada.

Consultants

The company consults a number of independent technical specialists whose skills and advice represent a considerable asset to the company at its development stage.

They are:—

General Canadian Bechtel Limited,
Toronto, Canada.

Mining T. R. Clarke & Associates,
Toronto, Canada.

Geology Behre, Dolbear & Co.,
New York, U.S.A.

Milling & Metallurgy

—Marshall & Garlick,
London, England.

—Kloeckner-Humboldt-Deutz,
Cologne, Germany.

—Geo-Met Reactors Limited,
Ottawa, Ontario.

(the latter concern is 33% owned by Mount Pleasant Mines Limited)

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Introduction

This report is an up-to-date account of the affairs of Mount Pleasant Mines Limited and a statement on the progress made in the task of bringing North America's first major tin mine into profitable production.

It has been prepared to serve as a ready reference on the company, management and the products to be marketed. The answers to the most often asked questions concerning the company's activities are also detailed.

Mount Pleasant possesses one of the most valuable strategic mineral deposits in North America. It is planned to develop it with all possible speed.

Financial

The financial statement for 1964 is currently being prepared for the Annual Report. It will be issued shortly and will be available for comment at the forthcoming Annual General Meeting in June.

Capitalization

The Authorized share capital consists of 7,500,000 common shares without par value and 128,398 5% non cumulative redeemable preference shares of the par value of 50 cents per share. 4,998,200 common shares are presently issued and outstanding as fully paid. No preference shares are outstanding.

Immediate plans for Financing

Property development calls for the implementation of the recommended pre-production program of our general consultants, the internationally known firm of Canadian Bechtel Limited.

This program will require considerable funds be spent prior to making senior financing arrangements.

It is intended to raise these funds and at the same time protect shareholders equity by granting "rights" to registered shareholders. This "rights" issue will enable those who exercise their rights to purchase one treasury share for each ten shares registered in their name at a price of \$1 a share. Each share so purchased will carry a warrant to purchase one additional share at \$1.25 up until November 30, 1965.

The outstanding shares set aside for the rights issue and not subscribed for as "rights" will be purchased by W. D. Latimer Co. Limited, thereby insuring the success of the issue.

Senior financing will be required for the major mine-mill development. This will likely take the form of a debenture or bond issue. The decision as to the size of the operation and the specific amounts of money required will be fixed at the conclusion of the pre-production program.

The Government of the Province of New Brunswick has issued a letter of intent to the company stating that, upon satisfactory evidence of ore reserves, milling and metallurgical technique, the Government will sponsor a bill to guarantee long term bonds of Mount Pleasant to the extent of \$5,000,000 in connection with the construction of the tin smelter.

**Agreement with Kennco Explorations
(Canada) Limited**

A new agreement has been signed with Kennco Explorations (Canada) Limited wholly owned subsidiary of Kennecott Copper Corporation.

Kennco has agreed to sell its 10% interest in the principal claims at Mount Pleasant and retire the debt of \$60,000 for 260,000 shares of Mount Pleasant stock.

Kennco has accepted an invitation to nominate a director to our Board.

The Products

The main product of Mount Pleasant Mines will be tin.

The by-products which will add substantially to the company's earnings are:—

Zinc, Fluorspar, Molybdenum, Lead, Copper, Cadmium, Bismuth, Tungsten, Indium, Silver.

For background and prices see also page 19 "Mount Pleasant products and their uses".

Development to Date

Development to date has been extensive. Early geophysical and geochemical surveys were followed by extensive diamond drilling and underground development including the driving of a 2,000 foot adit (tunnel). A program of metallurgical investigation has also been carried forward.

Total deferred development expenses amount to \$2,123,000:

The surface and underground development work to date is summarized as follows:—

Surface Diamond Drilling	68,237 Feet
Underground Diamond Drilling	25,110 Feet

Underground Development —

crosscuts, drifts, raises, etc. 3,812 Feet

Underground Excavation 1,300 Tons

Surface Excavation 2,200 Tons

Work to date indicates that:—

- The tin and other minerals occur in sheet-like and lense-like bodies called veins and lodes which fill fractures in an ancient volcanic rock mass. There are now seven tested lode systems. Many others are to be tested.
- The forty claims on which the exploration program has been concentrated divide naturally and geologically into three parts — the North Zone, the Fire Tower Zone and the South Zone. (See Map. p.).
- In the North Zone, where most of the development work has been done, there are now six tin bearing lodes included in ore reserve calculations.
- In the Fire Tower Zone, there is now one tin bearing lode included in ore reserves and one containing molybdenum which has not been included. Several additional tin and molybdenum bearing lodes are known to exist in this zone.
- In the South Zone there are a number of tin bearing lodes as yet untested.
- Preliminary exploration in other parts of the property shows that additional lodes containing tin and other metals are present.

Ore Reserves, Potential and Metallurgy

According to T. R. Clarke & Associates, Consulting Engineers of Toronto, there are 4,581,800 tons of indicated ore grading 0.56% tin, 2.47% zinc, 0.24% lead and 0.24% copper for the North and Fire Tower Zones with a contained value for the above metals of \$132,482,520, based on published unit metal values as of August 25, 1964 (when tin was \$1.79 Can. Funds per pound). The price of tin has risen to \$2.03 per pound (Canadian Funds) — May 1965.

The total ore potential following exploratory drilling, geochemical and geophysical surveys, has indicated that only one fortieth (1/40th) of the potential mineralized ground has been developed. The full potential of the property could be many times the indicated ore reserves at this stage of development.

Sustained efforts by Marshall and Garlick and the Warren Springs Laboratory of the Department of Scientific and Industrial Research, both of England, Kloeckner-Humboldt-Deutz in Germany and Geo-Met Reactors Limited in Ottawa have been successful in developing a flow sheet which will produce saleable concentrates of tin, zinc, fluorspar, molybdenum, lead and tungsten. The zinc concentrate contains substantial values in cadmium, bismuth, indium and silver.

Comparison with other producing deposits

The minerals present are almost identical for quantity and quality to the usual mineral deposits found in Southern Bolivia and Australia.

The most productive tin districts in Bolivia are of relatively limited extent, ranging between 120 and 420 acres. Llagua, the most productive area in 1935 contained 46 vein systems in an area of 400 acres.

Exploration work to date at Mount Pleasant indicates tin zones underlie a minimum of 700 acres. Only a small portion of this has been developed in detail.

Immediate Development Plans and Facilities

Immediate development plans as recommended by Canadian Bechtel Limited call for:

- Geology and Mine development.
- Metallurgical test work and design of 125 t.p.d. (tons per day) pilot mill.
- Construction of 125 t.p.d. pilot mill.
- Preparation and submission of a feasibility study.

Mine mill development will be managed by T. R. Clarke and Associates with direction and supervision of the program under Canadian Bechtel Limited. Some 36 men will be em-

ployed underground during this phase with 12 men in mill construction and test work.

This establishment will be reinforced by a technical staff of engineers and geologists assisted by varying numbers of construction workers as required.

Buildings which have been erected and fully equipped consist of mine office; engineering office; laboratory; crushing and grinding plant and mine change house.

The mine equipment consists of a compressor; electric generator; a diesel underground locomotive; a battery underground locomotive; a mucking machine; mine cars; rock drills and tractor with front end loader; plus vehicles necessary for transportation.

Power is now provided by diesel generators. At present a high voltage power line is being constructed by the New Brunswick Electric Power Commission from Oak Bay to Harvey. This power line crosses the north end of the property. The line is expected to be completed and power turned on in March of 1966.

Plans for Underground Development and 125 t.p.d. Mill

The underground development program is designed to further test the continuity of the ore bodies.

The 125 t.p.d. mill will test out variations to the Warren Springs flow sheet as recommended by our consultants, to assure the company of the most economic and efficient milling process before the plans for the main mill are finalized. This mill will be capable of producing marketable concentrates. The income from this is expected to defray the cost of operating it and a major portion of the mine development program.

This mill will also test out the effectiveness of treating low grade tin ore with the new Heavy Media (H-M) separation process now being effectively used at the Cornish tin mines.

Recent geological work has indicated the presence of large tonnages of low grade ore at

Mount Pleasant in addition to the main lodes. If H-M can upgrade this ore effectively the overall potential of the property will be greatly increased.

It is intended that the mill will be in operation well before the end of the year.

Following this the overall program will call for a full scale mine mill development. A long range projection calls for a completely integrated operation from mining the raw ores to final production of pure metals, high quality metal alloys and metallic compounds.

Marketing

The company continues to receive offers from purchasing groups and is considering the advisability of entering into firm agreements.

It is likely that for the first few years of production, metal concentrates will be sold to metal brokers and/or custom smelters.

A projection of operating profits, based on a 750 t.p.d. operation, is \$1,975,000.

When the smelters are in operation, high grade metals, etc., will be produced for direct sale in London and New York metal markets and operating profits will be increased substantially.

Tax Benefits

In addition to the usual three year tax exemption granted by the Federal Government the company will also receive the tax benefits that are specified for a designated area.

Mount Pleasant's other Interests

Mount Pleasant Mines Limited has other interests that are closely allied to those of the company.

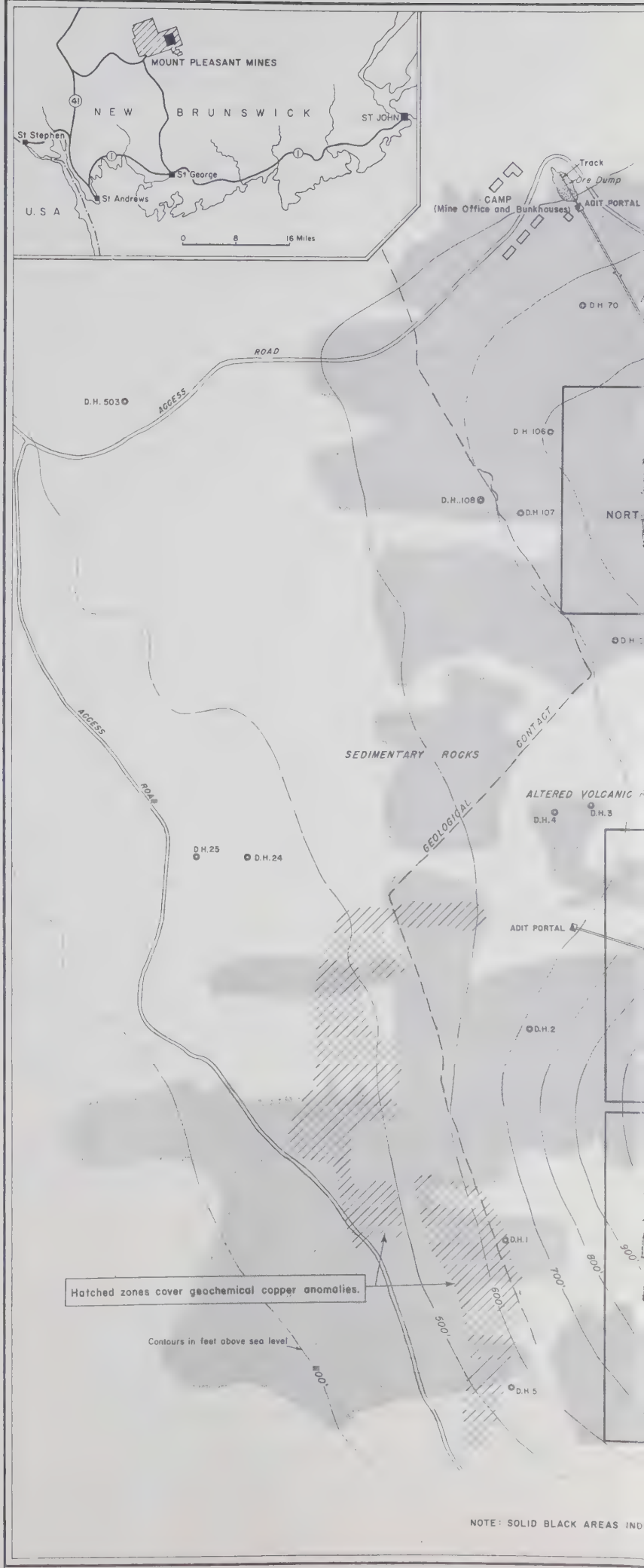
These are:—

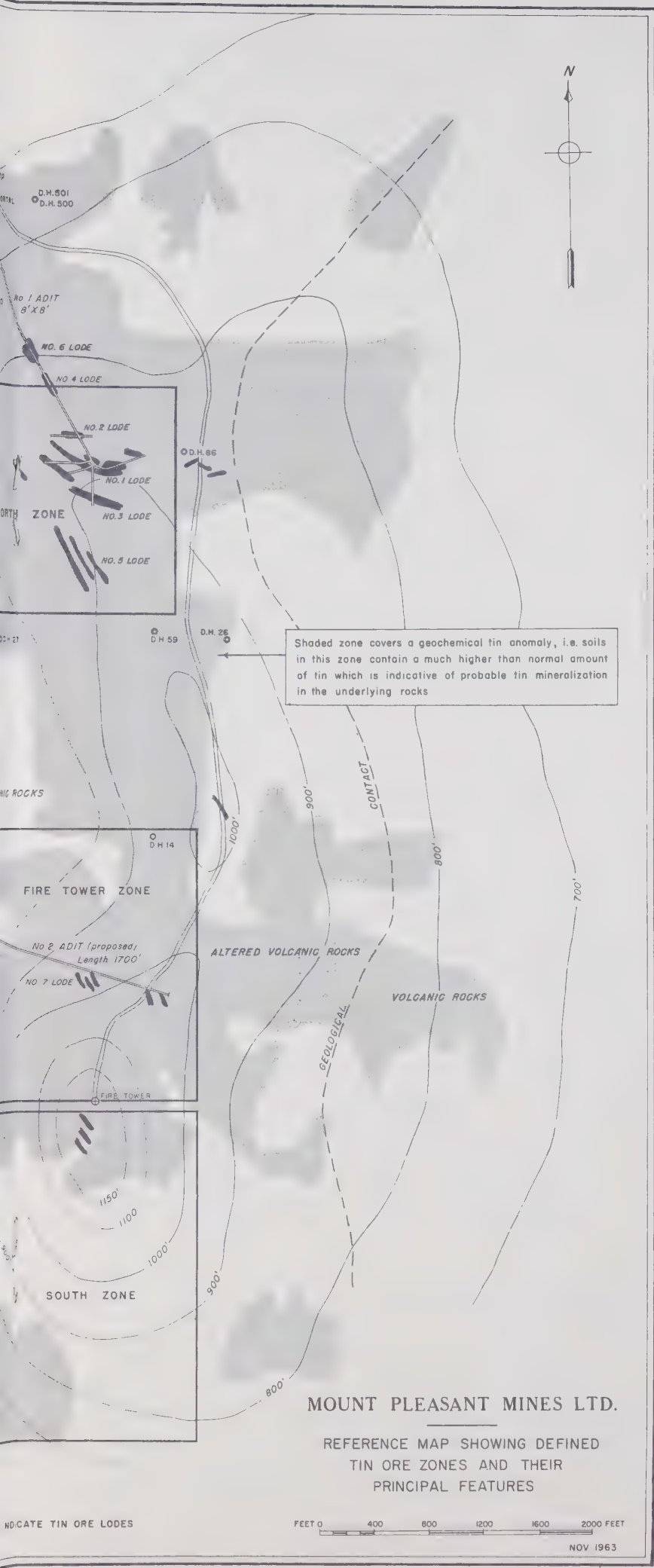
- Geo-Met Reactors Limited.
- Atlantic Nickel Mines Limited.
- Cornish Tin Improvements Limited.
- Mount Costigan Mines Limited.

In more detail these investments are:—

Geo-Met Reactors Limited

Mount Pleasant owns an approximate 33% in-





terest in the presently issued and outstanding Capital Stock of Geo-Met Reactors Limited, an Ottawa based private company whose main field of operation is in metallurgical research and development.

Geo-Met Reactors, formed in 1961, has developed a number of potentially profitable processes and is currently conducting research in promising metallurgical fields.

Masterloy Ltd., a wholly owned subsidiary of Geo-Met, produces master alloys of iron and molybdenum, columbium, tungsten and vanadium for the steel industry in Canada and elsewhere.

In 1964 the gross revenues were \$280,000 and the earnings amounted to 30% of the invested capital.

Atlantic Nickel Mines Ltd.

Mount Pleasant owns a substantial portion of the issued capital and controls the management of the company.

Atlantic Nickel, formed in 1963, purchased a mining property, containing a developed ore body and a number of indicated ore bodies, located near St. Stephen, New Brunswick. Ore reserves, as presently known, amount to 333,000 tons of probable ore grading 0.68% copper, and 1.27% nickel and 450,000 tons of possible ore grading 0.50% copper, 0.92% nickel plus additional tonnage of lower grade material.

Preliminary concentration and hydro-metallurgical tests on the ores indicate that an economically feasible operation is possible.

The next step for Atlantic is to complete the metallurgical test work this year after which the property will be readied for production.

Cornish Tin Improvements Limited

Mount Pleasant holds 1,000 7% preference shares and 14,000 common shares (16-2/3 of the issued common) of Cornish Tin. Cornish Tin plans to erect in the Cornwall district of England a Geo-Met type smelter, using a hydrogen reduction process owned 40% by Mount

Pleasant, for the treatment of tin tailings dumps and low grade concentrates.

Our company has certain rights to maintain its participation in these three companies on a pro rata basis should there be any offering of shares.

Mount Costigan Mines Limited

Mount Pleasant holds 36,300 shares of the common stock of Mount Costigan, which has an interest in a tin mine development in Tasmania, Australia. Mount Costigan is publicly owned and is listed on the Canadian Stock Exchange.

Discovery, Location and Size

The property was discovered as a mineralized area by geochemical prospecting in 1954 by Dr. J. E. Riddell and his associates. Some work was done at that time but the potential for tin was not fully realized until Dr. W. L. Young and Mr. N. Axiotis teamed up with him to form Mount Pleasant Mines Limited. All three became officers of the company.

The present development program was begun in 1960.

Located 20 miles from the deep water port of St. George in Charlotte County, New Brunswick, the property lies along the "Old Post Road" between St. Andrews and Fredericton. It is easily accessible by road.

The property consists of 543 mining claims covering approximately 21,000 acres in an area dominated by the mountain after which the company is named. It is shown on many of the oil company road maps of the Maritimes. It rises to 1,175 feet above sea level, the highest point in Southwestern New Brunswick.

Conclusion

Mount Pleasant Mines has all the ingredients necessary to make a successful tin base metal mine; ample ore potential, good mineral separation processes, strong long term markets and high prices for the products, excellent location and tax incentives.

Background To Tin As A World Wide need.

A study of the world situation in the use of tin and its many by-products sets in perspective the enormous potential of Mount Pleasant Mines Limited at this time.

For this reason the sections that follow have been prepared from conventional research sources. The figures quoted are correct at the time of going to press and may be quite simply updated as changes occur.

The Metal Tin

Today there is a world shortage of tin. This has been brought about by a remarkably large number of demands for the product and an extension of its uses. The industrial expansion of the free countries of the world, the United States, Great Britain, Italy, Holland, Belgium, and the Scandinavian countries, and the spectacular post war recovery and upsurge of West Germany and Japan into two most important industrial countries, has gone hand in hand with rising demands for tin. There has also been Russia's re-entry into the free world market as a major buyer of tin for the first time in many years. The post war population explosion world wide has also had an impact in increasing demands at a time when some of the producing mines in the countries like the Congo have passed their production peaks. Political instability has also attended such countries as Bolivia and Indonesia, where it has seriously curtailed production.

The impact of these events is shown by the fact that during the last seven years, world consumption has outstripped world production. For example, last year the free countries of the world (that excludes the Soviet Bloc and China) produced 146,000 long tons of tin, but they consumed 169,500 long tons, a deficiency of 23,500 long tons.

This shortage has raised prices from a low of 91¾ cents per pound since 1958, to the present price of \$2.03 cents (Canadian Funds) —an increase of more than 100%.

Last year's production of 146,000 long tons was divided as follows:

Malaya	60,500 Tons
Bolivia	24,000 Tons
Indonesia	16,500 Tons
Thailand	15,500 Tons
Nigeria	8,500 Tons
Congo	6,500 Tons
Australia, Burma, United Kingdom and other countries.	14,500 Tons

Ninety percent (90%) of the free world production comes from Malaya, Bolivia, Indonesia, Thailand, Nigeria and Congo, all of which are in politically sensitive areas.

United States and Canada are conspicuous by their absence as producers.

Last year's consumption of 169,500 long tons was divided as follows:

United States	60,000 Tons
Europe	64,000 Tons
Asia	26,000 Tons
Australasia	5,000 Tons
Africa	3,000 Tons
Canada	5,000 Tons
North and South America	
Except U.S. and Canada ...	4,000 Tons

There is no major producing tin mine on the North American continent and the world's biggest consumers, the United States and Canada combined are forced to obtain all their requirements from foreign mines.

In dollars and cents what does this mean to the North American economy?

In the post-war period—1945 to 1964—the total imports of tin into the United States and Canada amounted to Three Billion Dollars (\$3,000,000,000) — an extremely heavy dollar drain.

How it is used

The uses for tin are almost endless:—

- It is one of the rarest of the non-ferrous metals and at the same time one of the most indispensable.
- It is an extremely useful and versatile metal in our modern technology.
- Virtually no auto, no aeroplane, no locomotive, no truck, no bicycle, no mode of transportation is built without tin.
- Practically no machine, no mechanical or electrical household appliance, of any kind, is built without tin. Almost every industry uses tin in some form or another at some stage of its operation.

Our modern food economy is dependent on tin. It is a basic, necessary and essential metal in times of peace, a strategic and critical metal in times of war, or the threat of war and is stock-piled as such.

It has special properties and unique characteristics. It is a soft, ductile, malleable metal which is readily extruded, drawn, stamped and spun and can be hammered into very thin sheets. It is insoluble in water, very resistant to corrosion, unaffected by ordinary atmospheric conditions or by weak acids. It combines readily with other metals to form many useful alloys. It combines readily with other elements to form many useful compounds. Its most useful property is that it can be very thinly plated to iron, steel and other metals by chemical or electrolytic methods, which then, because of the corrosive resistance of tin and the strength of steel, form excellent food containers.

Tin is used in five different forms:

- Pure metal.
- Alloyed with copper.
- Alloyed with other metals.
- Inorganic tin compounds.
- Organic tin compounds.

Pure Metal

Tin is available on the market in 6 grades—A,

B, C, D, E, F (99.8% or higher to below 98%) and in 8 forms — anodes (for plating), wire, tape, pipe, sheet bar, ingot and pig form. Block tin is the usual designation for pure tin.

Its most important use is in the manufacture of tin-coated steel used in cans. In this connection the term "Tin" is invariably used incorrectly when really "Tinplate" is meant. The best example is the term "Tin-Can" when what is really meant is "Tinplate Can". These are absolutely indispensable not only in the food industry but in 135 other industries for protection of their products.

Tinplate is unsurpassed in protective qualities. The non-toxicity and the non-corrosiveness of tin are combined with the strength of steel. No other kind of container combines all the advantages of the tin can; economy, strength, durability, no effect on taste of contents, ease in mass handling without breakage, compactness, no light damage to contents, fast, easy filling and sealing at low cost.

The tinplate container is safe for prolonged storage of foods and beverages for human or animal consumption. There are cases on record where canned foods have remained perfectly preserved and edible for up to 114 years.

The tin can was patented by Peter Durand in England in 1810. A skilled tinsmith then could produce 60 hand made cans daily; some modern machines now turn out over 48,000 per hour!

The world production of tinplate has increased by leaps and bounds particularly since the introduction of the electrolytic process for plating of tin on steel.

Take a typical year like 1957. In that year, not a boom year, the use of steel for tin coating accounted for 1 ton out of every 20 tons of steel produced in the United States. In that year more than five million (5,000,000) tons of tinplate and thirty three thousand (33,000) long tons of tin were needed to make the forty six billion (46,000,000,000) tinned steel containers

used in the United States. Of these 60% were food cans and 40% non-food containers.

Block tin is used in coating copper vessels for culinary purposes and for coating lead sheet or lining lead pipe for carrying distilled water and some chemicals. These articles are very often called "two-ply metal". All copper wire which is to be rubber-covered must have a coat of tin. Other minor uses of tin alone are in tin foil and collapsible tubes.

Alloyed with Copper

In combination with copper, tin forms bronzes of various compositions, tin hardening the copper and making bronze resistant to a wider range of chemicals than most metals. It is therefore widely used. It has a comparatively low melting point, takes a high polish and is easy to cast in its molten state.

The most important bronzes are bell metal, speculum metal, phosphor bronze, gun metal, coinage bronze and statuary bronze.

Alloyed with Other Metals

In combination with other metals such as lead, zinc, antimony, bismuth, etc., tin forms a variety of alloys. The most widely used are the following, arranged alphabetically and not according to their importance: Babbit metal, Bearing metal, Britannia metal, Eutectic Fusible Alloy, Fine Solder, Pewter, Plumbers Solder, Type Metal, Woods Metal. These alloys are absolutely indispensable in a wide variety of industries and products; motor bearings for automobiles, trucks, tanks, aeroplanes, etc., shells, torpedoes, tracer bullets, flares, etc.; dies, fixtures, molds, patterns, boiler safety plugs and automatic sprinkler fuses.

In combination with lead (4 parts lead, 1 part tin) it is used in making Terns or Ternplate—coated sheet iron or steel.

To improve their quality and usefulness tin is very often added to certain types of brass—alloys of copper and zinc.

The most important use of the tin-lead alloys is in making solder for joining and seal-

ing metals. These are used in the melted state in a way that was developed nearly 2,000 years ago and today constitutes the second largest use for tin.

Inorganic Tin Compound

With inorganic elements, i.e., all elements except carbon, tin forms a number of compounds which are used in textile manufacturing, dyeing and in the making of glasses, ceramics, porcelains, etc. They are known as "butter of tin", "Flowers of tin", "pink salt", "preparing salt", "tin ash", "tin Bronze", "Tin crystals", "tin pyrite", "tin salt", etc.

In combination with fluorine, tin forms a compound termed chemically "Stannous fluoride", which has been added to tooth pastes to help prevent tooth decay.

In combination with oxygen, tin forms a compound termed chemically "Stannous Oxide", which is sold under different trade names: "Tinoxid", "Stanco", "Stannyl", "Stanoxyl", "Stannaca", etc. It is used in treating skin eruptions, boils, abscesses, pimples, styes, carbuncles, etc., caused by staphylococci.

Organic Tin Compounds

These compounds consist of tin combined chemically with the element carbon. They are comparatively new and have great possibilities in lubricating oils, pharmaceuticals, stabilizers, fungicides, etc.

Mount Pleasant By-Products and Their Uses

The by-products are essential to industry and the demand is very strong.

Here is a list of current prices and uses:

Zinc—14.5¢ per lb.

Uses—Galvanizing, diecastings, alloys.

Major consumers — steel, automobile and alloy manufacturing industries.

Fluorspar—\$32 per short ton approximately.

Uses—Production of industrial acids for the manufacture of fluorcarbon products, metallurgical fluxes.

Major consumers — steel, chemical and heavy chemical industries.

Molybdenum—\$3.35 per lb.

Uses—Manufacture of steel and alloys, pigments, catalysts.

Major consumers—steel and alloy manufacturing industries.

Lead—15.5¢ per lb.

Uses — Batteries, gasoline additive, pigments, metal products.

Major consumers — automobile and paint industries.

Copper—35¢ per lb.

Uses—Wire, brass.

Major consumers — electrical and alloy manufacturing industries.

Cadmium—\$2.85 per lb.

Uses — Electroplating, solder, low-melting point alloys, pigments, chemicals, batteries.

Major consumers — electroplating, alloy manufacturing, electrical paint and chemical industries.

Bismuth—\$3.85 per lb.

Uses—Fusible alloys, other alloys, pharmaceutical products.

Major consumers—alloy manufacturing and pharmaceutical industries.

Tungsten—\$2.75 per lb.

Uses—steel alloys; high temperature alloys, tungsten carbide, chemicals, tungsten wire, rod and sheet.

Major consumers — steel, electrical, alloy manufacturing and chemical industries.

Indium—\$2.00 per ounce (approximately).

Uses — Transistors, bearings, solders, glass sealing alloys, dental alloys, electrical contacts.

Major consumers—electrical and electronic industries.

Silver—\$1.30 per ounce.

Uses—Coinage, photographic material, sterling and plated ware, braxing alloys, electrical, and electronic equipment.

Major consumers — Government mints, photographic, silverware, alloy manufacturing, electrical and electronic industries.

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